

Appl. No. 10/785,995
Amendment filed May 21, 2007
Response to Office Action mailed December 19, 2006

Docket No. MEI-102

REMARKS

Pending Claims

Claims 19-23, 25, 26, 28-31, 33 and 34 are pending in this application. Claims 24, 27 and 32 have been canceled without prejudice or disclaimer. No new matter has been added.

Claim Rejections under 35 U.S.C. §101

Claims 19-34 have been rejected under 35 U.S.C. §101 because the claimed invention is directed to non-statutory subject matter. Specifically, the claimed subject matter has been rejected for not requiring any physical transformation or producing a tangible result. Applicants request reconsideration of the rejection for the following reasons.

35 U.S.C. § 101 requires that the invention sought to be patented be directed toward a new and useful process, machine, manufacture, or composition of matter. The claims are directed to a new and useful device. The rejection of the claims as being directed to nothing more than abstract ideas (such as mathematical algorithms) is inapplicable to the pending claims. *See* MPEP 2106 (IV)(B). Claim 19 is directed to a computer system of the invention that includes the access history management device and a plurality of information resource management devices coupled to a storage device and to a client computer; and claim 28 is directed to a management method involving management of the same devices. Claim 29 is directed to an access history management device in combination with a plurality of information resource management devices coupled to a storage device and to a client computer.

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According to claims 19 and 29, the access history management device sends an instruction to copy requested data from one storage device to another and the data is transferred as a result. Copying of the data involves physical transformation. Further, a tangible result is achieved by the present invention as a result of copying the data since the data is copied to a storage device that is coupled to an information resource management device from which a user requests the data. In claim 28, the method of managing a plurality of information resource management devices includes collecting access history information from the plurality of the information resource management devices and transferring data requested by a user from a storage device to a (first) information resource management device to store the requested data on a storage device which is coupled to the first information resource management device. Thus, claim 28 achieves a physical transformation of the data and provides a tangible result. Accordingly, applicants request withdrawal of the rejection under 35 U.S.C. §101.

Claim Rejections under 35 U.S.C. §§102 and 103

Claims 19, 21-25 and 27-33 have been rejected under 35 U.S.C. §102(e) as being anticipated by Dettinger et al., U.S. Publication No. 2003/0093413. Claim 20 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Dettinger in view of Pudipeddi et al., U.S. Publication No. 2002/0147881. Claims 26 and 34 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Dettinger in view of Jones et al., U.S. Publication No. 2002/0169794. Applicants request reconsideration of the rejections for the following

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reasons.

Claims 19 and 28 have been amended to respectively include the limitations of claims 24 and 32. Specifically, the limitations taken from claims 24 and 32 are directed to the aspect of the invention shown in Fig. 6 (step 35) and Fig. 7, as explained with respect to Fig. 1, as follows.

As shown in Fig. 1, each of the control nodes (information resource management devices) CN1, CN2 and CN3 manages an access history for accesses via their respective control node to the files stored in their respective storage nodes SN1, SN2 and SN3, respectively. As shown in Fig. 1, user "foo", who first used the client CLN1 to send an access request for the file "file_1a" stored in the storage node SN1, moves to the client CLN3 connected with the local area network LAN3. From there, "foo" sends an access request for the same file, "file_1a", via the control node CN3 to the control node CN1 as shown by the solid line arrow in Fig. 1. The file is transferred as shown by the dashed line arrow from the node CN1 to the node CN3. The record of the access shown by the arrows is accumulated in the access history. If the control node CN1 refers to the access history and detects frequent accesses from the control node CN3 by user "foo", it determines whether or not a device other than the control node CN3 has accessed the file "file_1a" and then replicates or migrates the file "file_1a" to the storage node SN3 controlled by the control node CN3 as shown by the bold line arrow. Replication or copying is performed if another device, for example CLN1, has accessed the file since the file would need to be maintained on the storage device for future accesses by CLN1. Otherwise migration is performed.

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Also, according to the invention, with respect to Fig. 9, after access requests are made by a client computer CLN3, and the access history manager 200 detects frequent accesses from the control node CN3 to the file "file_1b," of control node CN1, it sends an acquisition instruction for the file "file_1b" to the control node CN3 as shown by the broken line arrow in Fig. 9. When the control node CN3 receives the instruction, it refers to the file location information 108 to acquire the file "file_1b" from the storage node SN2 that stores the file "file_1b" and which has the shortest network distance from the control node CN3 as shown by the dashed line arrow. Claims 27 and 34 are supported by this embodiment of the invention and the description on page 24, lines 19-22 of the original specification which discloses that the embodiment of Fig. 9 can include a user ID in the access history to enable a file transfer instruction to be made in consideration of a user's movement.

In Dettinger, data is replicated when predefined replication thresholds, such as frequency of requests, are met. In particular, Dettinger, referring to paragraph [0025] of the reference, is relied upon for disclosing an access history management device that collects user information. The rejection refers to access manager metrics disclosed by Dettinger that include when a database request was issued, when the request was processed, the frequency of requests from a particular client, etc. Further, Dettinger states that if, for a given client, the predefined replication thresholds are met, then one or more tables 107 of the source database 104 are replicated to the client's local system.

However, there is no disclosure in the Dettinger of the access history management device of the present invention which collects access history information including user

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information for identifying a user from user information (user ID) who has sent an access request as a part of the access history (or the step of collecting access history information that indicates a source of an access request by a user ID, as in claim 28) in combination with determining, on the basis of the source of an access request in the access history information, if data is requested with a user ID from a first one of the information resource management devices other than an information resource management device which is coupled to one of the storage devices storing the requested data, after an access request of the requested data is sent with said user ID from a second one of the information resource management devices, and sends an instruction to copy the requested data based on the determination. Further, Dettinger does not disclose receiving an instruction to copy by an information resource management device that is coupled to a storage device that stores the requested data and transferring the requested data to the first information resource management device to store the requested data on one of the storage devices which is coupled to the first information resource management device. Accordingly, independent claims 19, 28 and 29, as amended, are patentable over Dettinger and the 35 U.S.C. § 102 rejection of claims 19, 21-23, 25 and 28-31 and 33 should be withdrawn.

Pudipeddi has been applied to claim 20 and Jones has been applied in the rejection of claims 26 and 34. However, neither of these references overcomes the deficiencies of Dettinger. Further, each of these claims is patentable at least for being dependent from base claims that are asserted to be patentable for the foregoing reasons. Accordingly, the rejections under 35 U.S.C. § 103 should be withdrawn and the claims allowed.

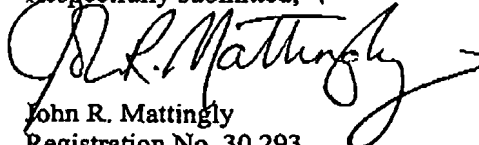
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Conclusion

In view of the foregoing, Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted, ,


John R. Mattingly
Registration No. 30,293
(703) 684-1120

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